Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Inquiry Concerning Deployment of	)	
Advanced Telecommunications	)	GN Docket No. 17-199
Capability to All Americans in a	)	
Reasonable and Timely Manner	)	

REPLY COMMENTS OF SMITH BAGLEY, INC.

Smith Bagley, Inc. ("SBI"), by counsel and pursuant to the Commission's Notice of Inquiry,[1] hereby provides the following reply comments in the above-captioned proceeding.

I. Introduction.

Founded in 1988, SBI provides commercial mobile wireless services in Arizona, New Mexico, Colorado, and Utah, serving over 110,000 customers, most of whom are Native Americans living on Tribal lands, including the Navajo Nation, the Hopi Tribe, the White Mountain Apache Tribe, the Ramah Navajo, and the Pueblo of Zuni. SBI's service area is among the most difficult to cover in the entire country, a Tribal land larger than West Virginia, most of which is populated by less than 10 people per square mile.

Demographic challenges on Tribal land in the Southwest region of the United States have limited commercial development and business formation, making it extraordinarily difficult to build telecommunications facilities that are reasonably comparable to those found in the

[1] *Inquiry Concerning Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion*, GN Docket No. 17-199, Thirteenth Section 706 Report Notice of Inquiry, 31 FCC Rcd 7029 (2017) ("*NOI*").

rest of America. For example, on the Navajo Nation:

- Approximately 40% of the residents are unemployed.
- Approximately 38% are below poverty line.
- Approximately 18% lack full plumbing in their homes.
- Approximately 15% have no access to telephone service of any kind.
- Access to Wireless/Wireline broadband at 25 Mbps download speed is 0%/3.8%, compared to the U.S. national average of 14%/85.3%, respectively.[2]

Although these statistics paint a bleak picture, the Commission can properly take credit for dramatically improving access to telephone service on Tribal lands. According to the 2000 Census, less than 40% of Tribal households had access to telephone service of any kind. Because of the federal Lifeline program, access has increased dramatically to approximately 75%, although it remains significantly behind access available to citizens living on non-Tribal lands.[3]

In terms of infrastructure development, SBI can report that it currently has 144 cell sites on Tribal lands, but only 17 are served by fiber and it appears feasible to serve another 25 towers with fiber. SBI estimates the average cost for a telephone company to install fiber to be $25 per foot, or $132,000 per mile. On average, it takes 2.5 microwave "hops" to reach one of SBI's Tribal towers. Remote towers lacking fiber provide 3G service at a speed of approximately 5 Mbps, but are not able to increase speeds to 4G LTE based on current microwave technology.[4]

[2] See Exhibit A.

[3] See Exhibit B, Letter from President Russell Begaye, Navajo Nation, to Chairman Ajit Pai, FCC (Feb. 3, 2017), illustrating the dramatic rise in telephone penetration on the Navajo Nation since 2000, coinciding directly with the start of Tribal Lifeline in Arizona in 2001, and again in 2005 when Tribal Lifeline was introduced in New Mexico.

[4] On Navajo Nation lands, 88% of SBI's towers "move wireless traffic between towers and switches via microwave facilities. That is a very high-quality solution for voice and basic Internet access, however, for [SBI] to deliver high-quality, fast 4G LTE broadband, towers must be directly connected to fiber." Letter from Justin E. Hinkle, President, SBI, to Hon. Ron Johnson, Chairman & Hon. Claire McCaskill, Ranking Member, U.S. Senate, Comm. on Homeland Security & Gov't Affairs (Sept. 29, 2017), at 5.

II. The Commission Must Conclude that Advanced Telecommunications Capability Is Not Being Deployed to All Americans in a Reasonable and Timely Fashion.

Section 706 of the Telecommunications Act of 1996 requires the FCC to evaluate annually, "whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion. If the Commission's determination is negative, it shall take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market."[5]

The Commission "propose[s] to measure whether advanced telecommunications capability is being deployed to all Americans, i.e., in all areas of the country, by examining *all* areas in the country, and comparing deployment across areas[,]"[6] and seeks comment "on how the Commission should treat the disparity between the availability of advanced telecommunications capability in urban areas (including disparities within urban areas), and the availability of such services in rural areas and on Tribal lands."[7]

Whatever the Commission determines for the rest of America, nothing in the statute prevents a conclusion that specific Tribal lands fall short of the "reasonable and timely" standard. That is, even if the Commission were to conclude that telephone and broadband services in rural America are being deployed such that no further regulatory action is needed, it is free to focus its conclusions on areas where advanced services fall short.[8] Attached as Exhibit C are

[5] 47 U.S.C. § 1302(b).

[6] *NOI*, 32 FCC Rcd at 7038 (para. 31) (emphasis in original).

[7] *Id*.

[8] Microsoft argues that "the Commission [should] continue to examine availability [of advanced telecommunications capability] in rural areas and Tribal lands and underperformance in those areas should trigger the statutory obligation for immediate action." Microsoft Corporation Comments at 5 n.7. SBI suggests that the FCC should take the analysis proposed by Microsoft one step further by making a specific determination regarding whether there is reasonably and timely deployment on Tribal lands, and by taking targeted regulatory action pursuant to

excerpts from the most recently available National Broadband Map, showing a wide disparity between broadband deployment on Tribal lands and broadband deployment throughout other areas of the nation.

SBI urges the Commission to look at all available data and set a standard for what constitutes reasonable and timely deployment of advanced telecommunications facilities. For example, on Navajo Nation lands, the fact that basic household telephone penetration lags behind the rest of America by nearly twenty percentage points should be enough for the FCC to conclude that service is not being deployed in a reasonable or timely fashion. The fact that broadband from all technologies deployed on Tribal lands lags behind deployment on non-Tribal lands by several orders of magnitude is enough to support the Commission's reaching the same conclusion.

In fact, the Commission highlighted the lack of broadband deployment on Tribal lands last year in making its "find[ing] that broadband is not being deployed to *all* Americans in a reasonable and timely fashion."[9] The Commission noted that "approximately 41 percent of Americans living on Tribal lands [were] lacking access to advanced telecommunications capability[,]"[10] and that the disparity between urban and rural broadband deployment "is even more severe

Section 706 if it determines that advanced telecommunications facilities are not being deployed on Tribal lands in a reasonable and timely fashion. One reason that a specific focus on Tribal lands is appropriate and necessary is that "41 percent of Americans living on Tribal lands (1.6 million people) lack access to 25 Mbps/3 Mbps broadband …." NetMoby, Inc., Comments at 5 (citing *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 15-191, 2016 Broadband Progress Report, 31 FCC Rcd 691 (2016) ("*2016 Broadband Progress Report*")).

[9] *2016 Broadband Progress Report*, 31 FCC Rcd at 750 (para. 121) (emphasis in original).

[10] *Id*. at 701 (para. 4) (footnote omitted).

for Americans on rural Tribal lands, where 68.2 percent lack access to fixed access service at 25 Mbps/3 Mbps or higher."[11] The Commission also emphasized that the overall broadband deployment disparity between urban areas and rural areas supported its finding that broadband is not being deployed to all Americans in a reasonable and timely fashion, noting, for example, that "Americans who live in rural areas are ten times more likely to be unserved than their urban counterparts."[12]

Once these conclusions are reached by the Commission regarding advanced broadband deployment on Tribal lands, and SBI believes no other conclusion could be justified, the Commission must focus its energy and resources on removing barriers to infrastructure investment and promoting competition on Tribal lands.

III. Suggested Actions to Remove Barriers to Investment and to Promote Competition.

A. Universal Service Support Is the Key Driver to Infrastructure Deployment.

Before 2000, household telephone penetration on Tribal lands that SBI serves was intractable. Put simply, no telephone company for decades built any telephone plant to serve many remote parts of the Navajo/Hopi/White Mountain Apache areas because there was no business model that could generate any hope of gaining a return on investment. Telephone penetration on the Navajo Nation stood at 38%.[13]

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[11] *Id*. at 750 (para. 121) (footnote omitted).

[12] *Id*.

[13] *See Telephone Penetration by Income by State (Data Through 1999), Industry Analysis Div., Common Carrier Bur., FCC (March, 2000) at 4, accessed at* http://transition.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/pntris99.pdf*;* U.S. Gen. Accountability Office*, Challenges to Assessing and Improving Telecommunications for Native Americans on Tribal Lands,* at 14 & Fig. 3 (2006), *accessed at* http://www.gao.gov/products/GAO-06-189.

In 2000, that changed, when the FCC adopted the Tribal Lifeline program.[14] With commendable foresight, the Commission added $25.00 per month of federal Lifeline support for each qualifying citizen residing on Tribal lands. The express purpose of the increase was to incent investment in facilities on unserved and underserved Tribal lands such as the Navajo Nation:

> By providing carriers with a predictable and secure revenue source, the enhanced Lifeline support … is designed to create incentives for eligible telecommunications carriers to deploy telecommunications facilities in areas that previously may have been regarded as high risk and unprofitable. We note that, ***unlike in urban areas where there may be a greater concentration of both residential and business customers, carriers may need additional incentives to serve tribal lands that, due to their extreme geographic remoteness, are sparsely populated and have few businesses***. In addition, given that the financial resources available to many tribal communities may be insufficient to support the development of telecommunications infrastructure, we anticipate that the enhanced Lifeline and expanded Link Up support will encourage such development by carriers. In particular, ***the additional support may enhance the ability of eligible telecommunications carriers to attract financing to support facilities construction in unserved tribal areas***. Similarly, ***it may encourage the deployment of such infrastructure by helping carriers to achieve economies of scale*** by aggregating demand for, and use of, a common telecommunications infrastructure by qualifying low-income individuals living on tribal lands.[15]

Combined with federal high-cost support, the additional Lifeline funds made available to any carrier that invested in facilities *and got customers*, provided exactly the proper incentive for carriers to invest. Over the years, SBI, Sacred Wind Communications, and CommNet Wireless have all built new telecommunications facilities on Tribal lands, increasing telephone pene-

[14] *See Federal-State Joint Board on Universal Service; Promoting Deployment and Subscribership in Unserved and Underserved Areas, Including Tribal and Insular Areas*, Twelfth Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, 15 FCC Rcd 12208 (2000) ("*Tribal Lifeline Order*").

[15] *See id.* at 12235-36 (para. 53) (emphasis added, footnotes omitted).

tration and broadband availability. SBI has used universal service support to upgrade its network to 3G, and is now in the process of rolling out 4G LTE to as much of its Tribal lands as possible.

Although Tribal Lands in the Southwest suffer from a wide gap in the Digital Divide,[16] great progress has been made to date with the federal universal service mechanism under multiple administrations. This has never been a partisan success story. What is needed now is added focus on federal universal service mechanisms for Tribal lands – keep doing what is working and make it better.

In 2011, the FCC decided to phase down legacy high-cost support for competitive ETCs such as SBI.[17] Phasing down high-cost support in areas that need infrastructure investment is the wrong prescription for closing the Digital Divide. Reduced support has caused SBI to decrease the number of new towers it had intended to construct and the amount of fiber it builds or leases. The lack of certainty about future funding has caused SBI to invest all federal support it receives, but not much more, because it is far from clear that SBI can keep the lights on at many cell sites in remote areas. Even in 2017, there is not enough economic activity and customer revenues to make up for any significant loss of support on Tribal lands that SBI serves. Accordingly, SBI urges the Commission to preserve and extend what has been a foundational

[16] The FCC has long recognized that citizens living on Tribal lands find themselves on the wrong side of this Digital Divide. See *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans In a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 15-191, Eleventh Broadband Progress Notice of Inquiry, 30 FCC Rcd 8823, 8824 (para. 2) (2015) (noting that "the *2015 Broadband Progress Report* highlighted the existence of a persistent 'digital divide' with Americans in rural areas and on Tribal lands disproportionately lacking access to broadband, even at speeds below the threshold for advanced telecommunications capability").

[17] *Connect America Fund, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, 17830-31 (paras. 513-515) (2011).

victory achieved over the past seventeen years, through the leadership of multiple administrations.

The Commission can reduce a barrier to providing modern mobile broadband services by initiating a targeted Tribal high-cost mechanism that fully funds the cost of extending service to remote areas. Increasing Mobility Fund II support to remote Tribal lands, and weighting any auction mechanism to ensure that Tribal support is directed toward areas that need it most, are two things the FCC can do immediately that will have a significant effect. By having funds needed to build or lease fiber in rural areas, SBI could easily and rapidly expand access to mobile broadband, and in all areas where fiber is extended the Commission's E-Rate and Rural Health Care program efforts can be expanded, improving services for schools, libraries, health care providers, and anchor institutions on Tribal Lands. This is surely the case for other carriers willing to invest in remote areas.

B. Lifeline Support Should be Targeted to Facilities-Based Carriers.

As shown above, the essential purpose of federal Lifeline support for Tribal lands (known as "Tier 4" support back in 2000) was to provide an incentive for carriers to invest in essential infrastructure to extend basic and advanced services to Tribal lands. Since the 2000 *Tribal Lifeline Order*, SBI has invested well in excess of $200 million on Tribal lands to build cell sites, backhaul, switching, and related infrastructure. Tens of thousands of Tribal residents who never before had telecommunications services are now enjoying high-quality telephone service and Internet access. Facilities-based competitors such as CommNet and Sacred Wind have entered as well, increasing the quantity of service and competitive choices for Tribal residents.

Wireless resellers, on the other hand, have no facilities, no switches, towers, wires, or

FCC licenses. They buy minutes and data from major carriers at a very low price and resell them to consumers, along with a handset. Most do not directly employ sales personnel to sell service to the public, but instead use third-party agents, most of whom are not connected directly to the telecommunications industry, such as check cashing companies, pawn shops, and money transfer outlets.

Wireless resellers do not, and cannot, use Tribal Lifeline support to build facilities on Tribal lands. Indeed, SBI can report that in reviewing Tribal Lifeline applications in several states, no reseller proposes construction of any facilities. The extra $25.00 that a reseller could capture from Tribal Lifeline goes to the reseller, oftentimes located in another state, or another country, frustrating the FCC's intent that funds be used for investment on Tribal lands.

Accordingly, and in response to the FCC's question regarding what steps it could take "to reduce the disparity in broadband availability between urban and rural areas and Tribal lands[,]"[18] SBI suggests that the $25 in Tribal Lifeline support should only be made available to facilities-based carriers who are capable of and committed to constructing facilities to serve Tribal lands. That was the FCC's intent back in 2000, some five years before resellers were permitted to participate in the Lifeline program. Resellers who wish to enter Tribal lands should be limited to $9.25 of support.

[18] *NOI*, 32 FCC Rcd at 7044 (para. 49).

IV. Conclusion.

Available data present an overwhelming case that advanced telecommunications capability is not being deployed to citizens residing on Tribal lands in a reasonable and timely fashion. The data should compel the Commission to reach this conclusion, which, in turn, should prompt the Commission to focus its efforts on taking effective actions to remove barriers to infrastructure investment and to promote competition among broadband service providers on Tribal lands.

Respectfully submitted,

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Exhibit A

Demographic Analysis of the Navajo Nation Using 2010 Census and 2010 American Community Survey Estimates

Completed for:

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Navajo Nation
Demographic Analysis

Introduction

This analysis of the Navajo Nation was undertaken by the Arizona Rural Policy Institute (ARPI) in the W.A. Franke College of Business at Northern Arizona University for the planning department of the Navajo Nation. The ARPI has produced the Demographic Profile for Navajo Nation with the latest information available from the 2010 Census and the 2010 American Community Survey (5-year estimates). This document is provided to Arizona tribes as a product of the EDA Technical Assistance Grant provided to the ARPI at Northern Arizona University.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties. Therefore, this report incorporates two major data sources. First, the official 2010 Census, primarily from the SF1 data report to produce data on the population, age, race and ethnicity relative to Navajo Nation. The second data source is the American Community Survey, 5-year estimate data for the period 2006 to 2010 and is annotated in the document as ACS 2010 (5-year estimates). The 2010 ACS 5-year estimates are based on data collected between January 2006 and December 2010. The data were used to analyze household income, poverty rates, employment, language use and household characteristics for Navajo Nation. Only the 5-year estimates are used as the data was provided for small geographic areas, representing the average characteristics over the 5-year period.

The analysis of demographics for the Navajo Nation first examines the 2010 Census and then the American Community Survey where data is available. Demographic characteristics for the Navajo Nation are outlined in three state partitions for Arizona, New Mexico and Utah. Comparisons between the state partitions serve to provide further levels of comparison when examining demographic characteristics of the tribe.

Appendix A contains official Census 2010 data and Appendix B contains American Community Survey data (5-Year Estimates) and Appendix C contains the margin of error estimates to be used to calculate the estimates for the American Community Survey data.

Poverty

Poverty rates on the Navajo Nation Reservation (38%) are more than twice as high as poverty rates in the State of Arizona (15%). Almost half (44%) of all children under 18 years of age are considered to be living in poverty, while one-third (34%) of tribal members between 18 and 64 also live in poverty. Almost one-third (29%) of persons living in families on the Navajo Nation live in poverty, twice the rate of families living in poverty in the State of Arizona (13%), for example. More than one-third of all persons over age 65 (39%) also live in poverty, five times higher that the State of Arizona (8%) for this age group. Poverty rates are consistent for Navajo Nation tribal members residing in all three states. See Table 15 and Figure 16.

Table 15 Poverty Status over the Last 12 Months

	Arizona	%	New Mexico	%	Utah	%	Total Navajo Nation	
Persons for whom poverty status is determined	98,106		64,143		6,212		168,461	
Persons Below Poverty	37,063	38%	24,039	37%	2,442	39%	63,544	38%
Persons under 18 for whom poverty status is determined	33,700		20,752		2,226		56,678	
Persons under 18 in Poverty	14,589	43%	9,281	45%	924	42%	24,794	44%
Persons aged 18 to 64 for whom poverty status is determined	54,970		37,731		3,558		96,259	
Persons aged 18 to 64 in Poverty	18,888	34%	12,475	33%	1,304	37%	32,667	34%
Persons over 65 for whom poverty status is determined	9,436		5,660		428		15,524	
Persons over 65 in Poverty	3,586	38%	2,283	40%	214	50%	6,083	39%
Persons in Families for whom poverty status is determined	87,592		57,241		5,684		150,517	
Persons in Families in Poverty	30,639	35%	19,971	35%	2,181	38%	52,791	35%
Unrelated Persons in Poverty	6,424	7%	4,068	6%	261	4%	10,753	6%

Source: ACS 2010, 5 Year Estimates

DP04

SELECTED HOUSING CHARACTERISTICS

2015 American Community Survey 1-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Navajo Nation Reservation and Off-Reservation Trust Land, AZ--NM--UT			
	Estimate	Margin of Error	Percent	Percent Margin of Error
HOUSING OCCUPANCY				
Total housing units	68,019	+/-1,948	68,019	(X)
Occupied housing units	46,212	+/-1,777	67.9%	+/-1.4
Vacant housing units	21,807	+/-1,062	32.1%	+/-1.4
Homeowner vacancy rate	0.0	+/-0.1	(X)	(X)
Rental vacancy rate	7.5	+/-2.1	(X)	(X)
UNITS IN STRUCTURE				
Total housing units	68,019	+/-1,948	68,019	(X)
1-unit, detached	48,664	+/-1,651	71.5%	+/-1.4
1-unit, attached	1,378	+/-348	2.0%	+/-0.5
2 units	974	+/-245	1.4%	+/-0.4
3 or 4 units	1,206	+/-310	1.8%	+/-0.5
5 to 9 units	529	+/-209	0.8%	+/-0.3
10 to 19 units	238	+/-198	0.3%	+/-0.3
20 or more units	16	+/-27	0.0%	+/-0.1
Mobile home	14,974	+/-995	22.0%	+/-1.3
Boat, RV, van, etc.	40	+/-65	0.1%	+/-0.1
YEAR STRUCTURE BUILT				
Total housing units	68,019	+/-1,948	68,019	(X)
Built 2014 or later	215	+/-146	0.3%	+/-0.2
Built 2010 to 2013	875	+/-228	1.3%	+/-0.3
Built 2000 to 2009	9,604	+/-862	14.1%	+/-1.2
Built 1990 to 1999	16,197	+/-1,046	23.8%	+/-1.3
Built 1980 to 1989	16,045	+/-855	23.6%	+/-1.1
Built 1970 to 1979	13,823	+/-889	20.3%	+/-1.1
Built 1960 to 1969	7,662	+/-723	11.3%	+/-1.1
Built 1950 to 1959	2,261	+/-392	3.3%	+/-0.6
Built 1940 to 1949	748	+/-217	1.1%	+/-0.3
Built 1939 or earlier	589	+/-182	0.9%	+/-0.3

Subject	Navajo Nation Reservation and Off-Reservation Trust Land, AZ--NM--UT			
	Estimate	Margin of Error	Percent	Percent Margin of Error
ROOMS				
Total housing units	68,019	+/-1,948	68,019	(X)
1 room	12,521	+/-827	18.4%	+/-1.1
2 rooms	5,531	+/-551	8.1%	+/-0.7
3 rooms	5,948	+/-524	8.7%	+/-0.8
4 rooms	14,596	+/-851	21.5%	+/-1.2
5 rooms	19,893	+/-1,101	29.2%	+/-1.3
6 rooms	6,370	+/-561	9.4%	+/-0.8
7 rooms	1,965	+/-326	2.9%	+/-0.5
8 rooms	676	+/-216	1.0%	+/-0.3
9 rooms or more	519	+/-189	0.8%	+/-0.3
Median rooms	4.2	+/-0.1	(X)	(X)
BEDROOMS				
Total housing units	68,019	+/-1,948	68,019	(X)
No bedroom	12,730	+/-853	18.7%	+/-1.1
1 bedroom	8,595	+/-696	12.6%	+/-1.0
2 bedrooms	16,209	+/-952	23.8%	+/-1.3
3 bedrooms	23,790	+/-1,279	35.0%	+/-1.5
4 bedrooms	5,611	+/-559	8.2%	+/-0.8
5 or more bedrooms	1,084	+/-253	1.6%	+/-0.4
HOUSING TENURE				
Occupied housing units	46,212	+/-1,777	46,212	(X)
Owner-occupied	35,751	+/-1,514	77.4%	+/-1.5
Renter-occupied	10,461	+/-823	22.6%	+/-1.5
Average household size of owner-occupied unit	3.81	+/-0.16	(X)	(X)
Average household size of renter-occupied unit	3.72	+/-0.25	(X)	(X)
YEAR HOUSEHOLDER MOVED INTO UNIT				
Occupied housing units	46,212	+/-1,777	46,212	(X)
Moved in 2015 or later	1,458	+/-398	3.2%	+/-0.8
Moved in 2010 to 2014	7,321	+/-828	15.8%	+/-1.7
Moved in 2000 to 2009	12,496	+/-991	27.0%	+/-1.7
Moved in 1990 to 1999	11,488	+/-845	24.9%	+/-1.7
Moved in 1980 to 1989	7,191	+/-652	15.6%	+/-1.3
Moved in 1979 and earlier	6,258	+/-621	13.5%	+/-1.3
VEHICLES AVAILABLE				
Occupied housing units	46,212	+/-1,777	46,212	(X)
No vehicles available	6,335	+/-632	13.7%	+/-1.2
1 vehicle available	17,545	+/-1,125	38.0%	+/-1.9
2 vehicles available	13,259	+/-1,014	28.7%	+/-1.9
3 or more vehicles available	9,073	+/-683	19.6%	+/-1.4
HOUSE HEATING FUEL				
Occupied housing units	46,212	+/-1,777	46,212	(X)
Utility gas	5,005	+/-575	10.8%	+/-1.1
Bottled, tank, or LP gas	3,856	+/-490	8.3%	+/-1.0
Electricity	5,584	+/-604	12.1%	+/-1.3
Fuel oil, kerosene, etc.	129	+/-96	0.3%	+/-0.2
Coal or coke	276	+/-113	0.6%	+/-0.2
Wood	29,656	+/-1,362	64.2%	+/-1.6
Solar energy	80	+/-81	0.2%	+/-0.2
Other fuel	1,408	+/-348	3.0%	+/-0.7
No fuel used	218	+/-120	0.5%	+/-0.3

Subject	Navajo Nation Reservation and Off-Reservation Trust Land, AZ--NM--UT			
	Estimate	Margin of Error	Percent	Percent Margin of Error
SELECTED CHARACTERISTICS				
Occupied housing units	46,212	+/-1,777	46,212	(X)
Lacking complete plumbing facilities	8,537	+/-779	18.5%	+/-1.5
Lacking complete kitchen facilities	6,361	+/-691	13.8%	+/-1.4
No telephone service available	7,146	+/-673	15.5%	+/-1.3
OCCUPANTS PER ROOM				
Occupied housing units	46,212	+/-1,777	46,212	(X)
1.00 or less	37,773	+/-1,620	81.7%	+/-1.6
1.01 to 1.50	3,847	+/-521	8.3%	+/-1.1
1.51 or more	4,592	+/-503	9.9%	+/-1.0
VALUE				
Owner-occupied units	35,751	+/-1,514	35,751	(X)
Less than $50,000	18,421	+/-1,101	51.5%	+/-2.1
$50,000 to $99,999	9,027	+/-733	25.2%	+/-1.7
$100,000 to $149,999	3,731	+/-466	10.4%	+/-1.3
$150,000 to $199,999	2,532	+/-435	7.1%	+/-1.2
$200,000 to $299,999	871	+/-241	2.4%	+/-0.7
$300,000 to $499,999	591	+/-198	1.7%	+/-0.5
$500,000 to $999,999	499	+/-202	1.4%	+/-0.6
$1,000,000 or more	79	+/-57	0.2%	+/-0.2
Median (dollars)	48,000	+/-2,743	(X)	(X)
MORTGAGE STATUS				
Owner-occupied units	35,751	+/-1,514	35,751	(X)
Housing units with a mortgage	4,089	+/-521	11.4%	+/-1.3
Housing units without a mortgage	31,662	+/-1,404	88.6%	+/-1.3
SELECTED MONTHLY OWNER COSTS (SMOC)				
Housing units with a mortgage	4,089	+/-521	4,089	(X)
Less than $500	875	+/-234	21.4%	+/-4.4
$500 to $999	2,455	+/-382	60.0%	+/-5.7
$1,000 to $1,499	610	+/-151	14.9%	+/-3.8
$1,500 to $1,999	93	+/-76	2.3%	+/-1.8
$2,000 to $2,499	56	+/-80	1.4%	+/-1.9
$2,500 to $2,999	0	+/-189	0.0%	+/-3.5
$3,000 or more	0	+/-189	0.0%	+/-3.5
Median (dollars)	684	+/-38	(X)	(X)
Housing units without a mortgage	31,662	+/-1,404	31,662	(X)
Less than $250	22,582	+/-1,271	71.3%	+/-2.2
$250 to $399	5,817	+/-572	18.4%	+/-1.7
$400 to $599	2,437	+/-412	7.7%	+/-1.3
$600 to $799	621	+/-168	2.0%	+/-0.5
$800 to $999	146	+/-98	0.5%	+/-0.3
$1,000 or more	59	+/-51	0.2%	+/-0.2
Median (dollars)	179	+/-5	(X)	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI)				
Housing units with a mortgage (excluding units where SMOCAPI cannot be computed)	3,915	+/-504	3,915	(X)
Less than 20.0 percent	2,095	+/-416	53.5%	+/-6.8
20.0 to 24.9 percent	479	+/-175	12.2%	+/-4.4
25.0 to 29.9 percent	217	+/-122	5.5%	+/-3.1
30.0 to 34.9 percent	219	+/-98	5.6%	+/-2.5
35.0 percent or more	905	+/-264	23.1%	+/-6.1

Subject	Navajo Nation Reservation and Off-Reservation Trust Land, AZ--NM--UT			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Not computed	174	+/-100	(X)	(X)
Housing unit without a mortgage (excluding units where SMOCAPI cannot be computed)	29,142	+/-1,330	29,142	(X)
Less than 10.0 percent	16,850	+/-989	57.8%	+/-2.3
10.0 to 14.9 percent	4,382	+/-566	15.0%	+/-1.8
15.0 to 19.9 percent	2,521	+/-447	8.7%	+/-1.4
20.0 to 24.9 percent	1,267	+/-219	4.3%	+/-0.7
25.0 to 29.9 percent	892	+/-316	3.1%	+/-1.1
30.0 to 34.9 percent	678	+/-220	2.3%	+/-0.7
35.0 percent or more	2,552	+/-447	8.8%	+/-1.4
Not computed	2,520	+/-382	(X)	(X)
GROSS RENT				
Occupied units paying rent	8,607	+/-739	8,607	(X)
Less than $500	4,392	+/-609	51.0%	+/-5.2
$500 to $999	3,711	+/-519	43.1%	+/-5.3
$1,000 to $1,499	383	+/-166	4.4%	+/-1.9
$1,500 to $1,999	121	+/-174	1.4%	+/-2.0
$2,000 to $2,499	0	+/-189	0.0%	+/-1.7
$2,500 to $2,999	0	+/-189	0.0%	+/-1.7
$3,000 or more	0	+/-189	0.0%	+/-1.7
Median (dollars)	491	+/-40	(X)	(X)
No rent paid	1,854	+/-325	(X)	(X)
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI)				
Occupied units paying rent (excluding units where GRAPI cannot be computed)	8,120	+/-727	8,120	(X)
Less than 15.0 percent	3,538	+/-550	43.6%	+/-5.3
15.0 to 19.9 percent	1,193	+/-341	14.7%	+/-3.9
20.0 to 24.9 percent	725	+/-226	8.9%	+/-2.8
25.0 to 29.9 percent	471	+/-209	5.8%	+/-2.5
30.0 to 34.9 percent	388	+/-184	4.8%	+/-2.2
35.0 percent or more	1,805	+/-348	22.2%	+/-4.0
Not computed	2,341	+/-388	(X)	(X)

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

Households not paying cash rent are excluded from the calculation of median gross rent.

While the 2015 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2015 American Community Survey 1-Year Estimates

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

Exhibit B

THE NAVAJO NATION

RUSSELL BEGAYE PRESIDENT
JONATHAN NEZ VICE PRESIDENT

February 3, 2017

Ajit Pai, Chairman
Federal Communications Commission
445 12th Street, SW
Eighth Floor
Washington, DC 20554

Re: Lifeline Documentation Request

Dear Chairman Pai,

I write to express my grave concerns about a recent decision by the Universal Service Administrative Company ("USAC") that would force over a thousand low-income Navajo Nation residents to lose essential phone service supported by the Lifeline program.

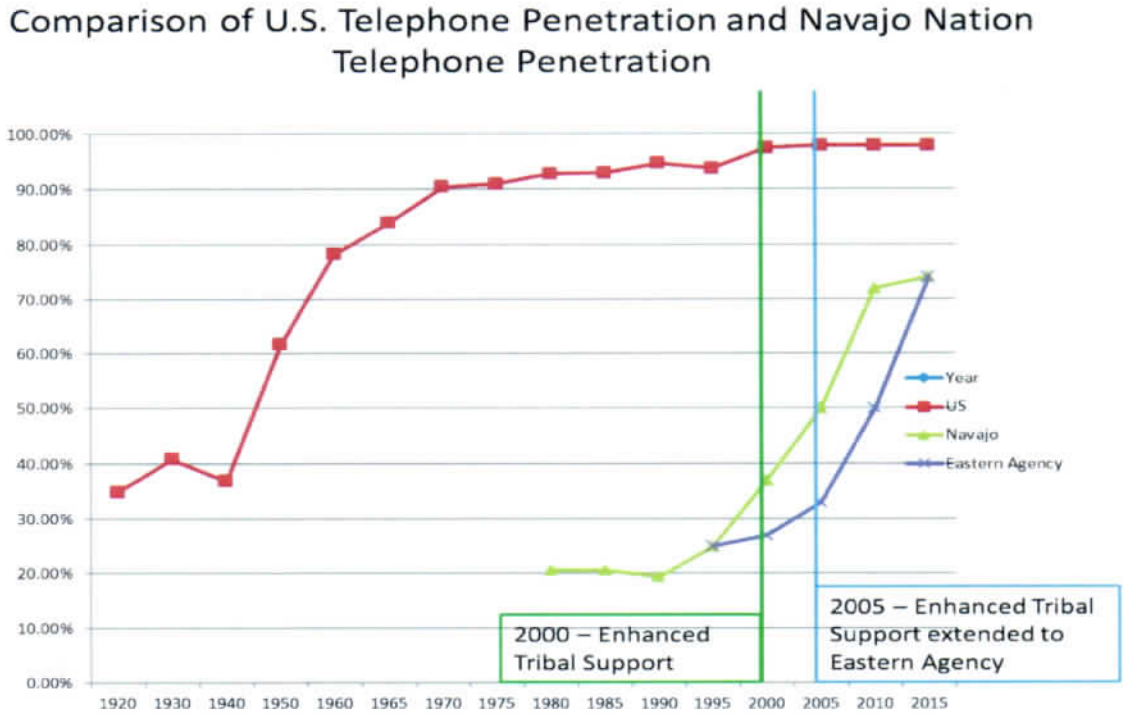
Smith Bagley, Inc. d/b/a Cellular One is one of a number of carriers that provide discounted cellphone service on Navajo Nation. Cellular One has provided service through the FCC's Lifeline program for over 16 years. The company has been focused on serving our communities, and has built wireless service to some of our most remote areas, where our citizens often lack access to basic services.

USAC has instructed Cellular One to obtain documents from approximately 3,000 customers to verify their identity for Lifeline purposes with a time limit of 45 days. Most of these customers, living in some of the most unreachable areas in the country, have no mail service to their homes. Some have no or limited electricity, so keep their Lifeline phones turned off except for emergency use. Many are elderly and disabled. Especially in winter, it is a serious challenge for people in these areas to travel long distances. In recent days, Vice President Nez and I declared a state of emergency throughout Navajo Nation due to severe winter weather. Yet USAC demands that all of these people travel these distances by February 18, 2017, in the middle of the long Navajo winter or lose their phones.

I understand that Cellular One has been doing intensive outreach in response to USAC's instruction, but more than a thousand customers remain. These customers need time to have a chance to provide these papers.

Our Navajo Nation Telecommunications Regulatory Commission (NNTRC) has tried to keep the FCC abreast of the unique challenges faced by the Navajo Nation in bringing even basic telephone service to its people. Yet they tell me that in a recent report released by the FCC just last month, the data show that since the FCC has adopted "reforms" in the Lifeline service, participation by people on tribal lands has dropped 65 percent (from a high of 858,420 participants to a current level of 299,965), while participation by subscribers in non-tribal areas has been reduced by less than 30 percent. It appears that these reforms have had a highly disproportional and draconian effect on Native Americans.

The Lifeline Program is essential to the Navajo Nation, both because it provides a subsidy to many Navajos who otherwise could not afford phone service, and by providing a stable subscriber base for carriers who are then willing to expand infrastructure to reach even more subscribers. The chart below, prepared by my NNTRC, and previously submitted to the FCC, shows what has happened since the beginning of the Lifeline program.



As you can see, when the Lifeline Program began in 1985, barely 20 percent of Navajos had telephones. That number didn't really begin to increase until the FCC adopted the "Tier 4" Enhanced Lifeline subsidy in 2000 (and even that was slightly stalled because the FCC didn't consider the New Mexico portion of the Navajo Nation (the "Eastern Agency") to be Tribal lands until 2005). Today approximately 75 percent of Navajos have telephones, but that is only comparable to nationwide telephone penetration during the Eisenhower Administration in the 1950s.

Thousands of Navajos have already lost their Lifeline phones. Thousands more losing their phones because USAC will cut them off in the dead of winter may jeopardize the viability of the telephone system on the Navajo Nation. I implore you to step in and direct USAC to work with the carriers and our NNTRC to resolve this issue in a way that doesn't jeopardize the safety of my people.

Respectfully,

THE NAVAJO NATION

Russell Begaye, *President*

Cc: Commissioner Mignon Clyburn
Commissioner Michael O'Reilly
Office of Native Affairs and Policy

Exhibit C

National Broadband Map
How connected is my community?

Analyze » Summarize

Native Nations » ALL Native Nations

Below is a summary of the broadband characteristics for the area listed above. The broadband data below is as of June 30, 2014 and represents data collected by SBDD grantees. Click on the section headings to see more information.

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Wireline

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Speed	Percent Population	Nationwide
Dn>3Mbps Up>768kbps	62.1%	94.8%
Download > 3Mbps	65.7%	95.4%
Download > 6Mbps	57.1%	94.2%
Download > 10Mbps	52.4%	92.9%
Download > 25Mbps	37.5%	85.3%
Download > 50Mbps	29.4%	83.2%
Download > 100Mbps	21.9%	64.8%
Download > 1Gbps	7.0%	7.9%

Source API Call

Wireless

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Speed	Percent Population	Nationwide
Dn>3Mbps Up>768kbps	86.4%	99.3%
Download > 3Mbps	86.4%	99.3%
Download > 6Mbps	79.5%	98.5%
Download > 10Mbps	77.8%	98.2%
Download > 25Mbps	14.3%	14.0%
Download > 50Mbps	11.7%	6.6%
Download > 100Mbps	11.6%	4.3%
Download > 1Gbps	0.0%	0.1%

Source API Call

Technology	Percent Population	Nationwide
DSL	66.7%	90.0%
Fiber	12.8%	25.4%
Cable	31.5%	88.8%
Wireless	89.8%	99.4%
Other	0.0%	0.0%

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Demographics

Total area (sq miles)	111,169
Population	974,892
Housing Units	444,216

Age	Area (%)	Nationwide
under 5	7.47%	5.73%
5 - 19	26.94%	20.76%
20 - 34	21.62%	19.57%
35 - 59	26.41%	32.66%
60+	17.56%	21.28%

Race	Area (%)	Nationwide
White	37.32%	69.32%
Black	1.29%	11.19%
Hispanic	9.14%	14.91%
Asian/Pacific Islander	0.74%	4.08%
Native American	51.51%	0.48%

Income	Area (%)	Nationwide
Median income	$41,570	$58,811
Poverty rate	21.21%	15.81%
Below $25k	34.64%	24.04%
$25k-$50k	27.17%	24.58%
$50k-$100k	27.01%	30.66%
$100k-$200k	9.65%	16.50%
$200k or more	1.52%	4.21%

Education	Area (%)	Nationwide
High School graduate	72.11%	79.93%
Bachelor's degree or higher	12.76%	24.84%

Source API Call

Source API Call

Number of Internet Providers

Wireline Wireless

#	Percent Population	Nationwide
0	22.5%	3.0%
1	43.1%	8.8%
2	21.6%	32.4%
3	6.4%	36.9%
4	3.2%	13.7%
5	2.8%	3.6%
6	0.3%	1.3%
7	0.0%	0.4%
8+	0.0%	0.1%

Source API Call

Broadband Speed Test (Mbps)

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Location	Cumulative Tests	25th percentile	median speed (Mbps)	75th percentile
Home	1,034	1.2		8.5
Schools, Libraries, Community Centers	145	1.4		4.0
Medium/Large Business	103	1.5		10.2
Small Business	132	1.4		8.5
Mobile	4,443	0.5		4.2
Other	29	0.5		23.1

Source API Call

0 23.1

Community Anchor Institutions

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Institution	Total Number of Records	Subscribe to Broadband: Yes	No	Not Provided	Speeds Reported
Schools K through 12	670	445	2	223	406
University, College, other post-secondary	68	31	0	37	29
Libraries	168	106	1	61	97
Medical / Healthcare	241	80	1	160	60
Public Safety	575	84	80	411	58
Community Centers - Government support	350	238	3	109	192
Community Centers - Non-Government support	98	41	0	57	36

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Rank »
Rank my community

Provider »
View statistics about providers

Broadband Classroom »
Learn more about broadband

Engage »
Build a better map for my community

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Your Feedback is important!
posted by Anne Neville on February 16, 2011

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results: 6.51 seconds

Analyze » Summarize

Native Nations » Navajo Nation

Below is a summary of the broadband characteristics for the area listed above. The broadband data below is as of June 30, 2014 and represents data collected by SBDD grantees. Click on the section headings to see more information.

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Wireline

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Speed	Percent Population	Nationwide
Dn>3Mbps Up>768kbps	26.1%	94.8%
Download > 3Mbps	27.2%	95.4%
Download > 6Mbps	19.4%	94.2%
Download > 10Mbps	18.6%	92.9%
Download > 25Mbps	3.8%	85.3%
Download > 50Mbps	1.1%	83.2%
Download > 100Mbps	1.1%	64.8%
Download > 1Gbps	0.0%	7.9%

Source API Call

Wireless

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Speed	Percent Population	Nationwide
Dn>3Mbps Up>768kbps	55.8%	99.3%
Download > 3Mbps	55.8%	99.3%
Download > 6Mbps	48.0%	98.5%
Download > 10Mbps	47.8%	98.2%
Download > 25Mbps	0.0%	14.0%
Download > 50Mbps	0.0%	6.6%
Download > 100Mbps	0.0%	4.3%
Download > 1Gbps	0.0%	0.1%

Source API Call

Technology	Percent Population	Nationwide
DSL	59.2%	90.0%
Fiber	0.2%	25.4%
Cable	0.2%	88.8%
Wireless	62.4%	99.4%
Other	0.0%	0.0%

Source API Call

Number of Internet Providers

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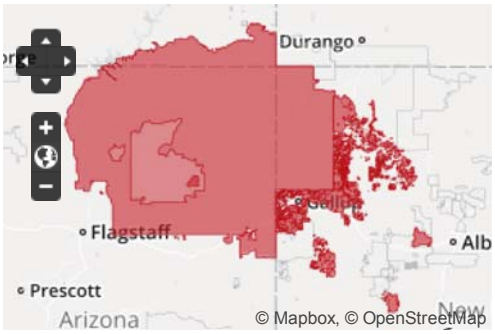

Demographics

Total area (sq miles)	23,294
Population	161,251
Housing Units	71,445

Age	Area (%)	Nationwide
under 5	8.48%	5.73%
5 - 19	31.11%	20.76%
20 - 34	24.89%	19.57%
35 - 59	24.41%	32.66%
60+	11.11%	21.28%

Race	Area (%)	Nationwide
White	1.47%	69.32%
Black	0.02%	11.19%
Hispanic	1.50%	14.91%
Asian/Pacific Islander	0.08%	4.08%
Native American	96.93%	0.48%

Income	Area (%)	Nationwide
Median income	$28,039	$58,811
Poverty rate	29.38%	15.81%
Below $25k	49.29%	24.04%
$25k-$50k	24.79%	24.58%
$50k-$100k	20.43%	30.66%
$100k-$200k	5.07%	16.50%
$200k or more	0.42%	4.21%

Education	Area (%)	Nationwide
High School graduate	56.40%	79.93%
Bachelor's degree or higher	6.67%	24.84%

Source API Call

Wireline | Wireless

#	Percent Population	Nationwide
0	38.8%	3.0%
1	58.6%	8.8%
2	2.6%	32.4%
3	0.0%	36.9%
4	0.0%	13.7%
5	0.0%	3.6%
6	0.0%	1.3%
7	0.0%	0.4%
8+	0.0%	0.1%

Source API Call

Broadband Speed Test (Mbps)

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Location	Cumulative Tests	25th percentile	median speed (Mbps)	75th percentile
Home	40	0.8	3.1	
Schools, Libraries, Community Centers	1	89.3	89.3	
Medium/Large Business	5	1.2	2.9	
Small Business	0			
Mobile	237	0.1	1.5	
Other	0			

Source API Call

0 89.3

Community Anchor Institutions

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Institution	Total Number of Records	Subscribe to Broadband: Yes	No	Not Provided	Speeds Reported
Schools K through 12	89	38	0	51	33
University, College, other post-secondary	18	5	0	13	5
Libraries	10	4	0	6	4
Medical / Healthcare	42	9	0	33	9
Public Safety	37	1	0	36	1
Community Centers - Government support	76	50	1	25	30
Community Centers - Non-Government support	3	3	0	0	3

Source API Call

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